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DOCKET NO. 11-0767

IAWC EXHIBIT 10.00R

**REBUTTAL TESTIMONY OF
PAULINE M. AHERN**

ILLINOIS-AMERICAN WATER COMPANY

MARCH 29, 2012

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**REBUTTAL TESTIMONY
OF
PAULINE M. AHERN**

I. WITNESS INTRODUCTION

Q1. Please state your name and business address.

A. My name is Pauline M. Ahern and I am a Principal of AUS Consultants. My business address is 155 Gaither Drive, Suite A, Mt. Laurel, New Jersey 08054.

Q2. Are you the same Pauline M. Ahern who previously filed testimony in this proceeding?

A. Yes I am.

II. PURPOSE OF REBUTTAL TESTIMONY

Q3. What is the purpose of your rebuttal testimony?

A. The purpose of my Rebuttal Testimony is to respond to the Direct Testimony submitted in this proceeding by Illinois Commerce Commission (“ICC”) Staff Witness Janis Freetly. I will also respond to the Direct Testimony of Illinois Industrial Water Consumers and Federal Executive Agencies (“IIWC/FEA”) Witness Michael P. Gorman.

Q4. Have you prepared exhibits which support your recommended common equity cost rate?

A. Yes, I have. They have been marked for identification as IAWC Exhibits 10.01R through 10.21R.

III. RESPONSE TO DIRECT TESTIMONY OF ICC STAFF WITNESS MS. FREETLY

**A. General Response to Ms. Freetly’s
Recommended Common Equity Cost Rate**

Q5. Do you have any initial comments on Ms. Freetly's recommended cost of capital for IAWC?

A. Ms. Freetly's recommended cost of common equity ("ROE") of 9.35% violates the economic principle of opportunity cost, meaning the return given up or foregone by investing in one investment as opposed to an alternative investment of comparable risk. Ms. Freetly's recommended 9.35% ROE results in an effective authorized return on common equity for IAWC of only 8.32% based upon a company-provided income tax rate of 37.88% and as derived in IAWC Exhibit 10.01R. This return is applied to a capital structure containing significantly greater financial risk than IAWC's actual capital structure. There is no incentive for American Water to invest in IAWC if the parent would have to forego the risk-adjusted return of 9.35% on alternative investments of comparable risk.

Q6. Please discuss Ms. Freetly's recommended common equity cost rate of 9.35% in light of IAWC's currently allowed ROE of 10.38% authorized in April 2010.

A. As discussed in my Direct Testimony at page 72, line 1883 through page 76, line 1974, notwithstanding lower interest rates, the cost of common equity has actually risen as the equity risk premium has risen. The U.S. continues to recover slowly and uncertainly from the Great Recession of 2008 and 2009. Interest rates continue to fall in response to the Board of the Federal Reserve System's (the Fed) vow to keep the fed funds rate at its current level or 0.00% - 0.25% through late 2014. In doing so, the Fed stated "Most participants judge that the current outlook – for a moderate pace of economic recovery with the

unemployment rate declining only gradually and inflation subdued – warranted exceptionally low levels of the federal funds rate at least until late 2014”¹. In addition, U.S. Treasury and Moody’s public utility bond yields have continued to fall.

As shown on page 1 of IAWC Exhibit 10.02R, actual yields on 30 year U.S. Treasury Bonds have fallen 158 basis points from 4.69% in April 2010, the month in which IAWC’s current authorized common equity cost rate of 10.38% was ordered, to 3.11% in February 2012. On a forecasted basis, as shown on page 3, *Blue Chip Financial Forecasts (“Blue Chip”)* reports that the consensus forecast yields on 30 year U.S. Treasury Bonds have fallen 188 basis points from 5.30% on April 1, 2010 to 3.42% on March 1, 2012, both for the furthest quarter forecasted each month. Similarly, the yields on Moody’s A-rated and Baa-rated public utility bonds fell during the period from 5.84% to 4.36% (148 basis points) and from 6.22% to 5.02% (120 basis points), respectively, as shown on page 2.

The decrease in bond yields was been coupled with an increase in the volatility of the stock market as measured by the VIX Index,² which measures the implied volatility of S&P 500 index options, most notably since June 2011, representing investors’ expectation of stock market volatility over the next month. However, in the last few months this volatility has subsided somewhat and the VIX stands at 18.43 as of February, 2012. Although the overall market is higher now than in April 2010 and investors’ expectation of stock market volatility has

¹ Minutes of the Federal Open Market Committee – January 24-25, 2012, 10.

² VIX is the ticker symbol for the Chicago Board Options Exchange Market Volatility Index.

68 abated, an increasing market equity risk premium persists. As noted by George

69 M. Constantinides³:

70 In economic recessions, investors are exposed to the double
71 hazard of stock market losses and job loss. Investment in equities
72 not only fails to hedge the risk of job loss but also accentuates its
73 implications. Investors require a hefty equity premium in order to be
74 induced to hold equities.

75 This is evident in Value Line's expected total return 3-5 years hence,
76 described previously in this testimony. In early April 2010, the expected total
77 return was 12.57%, rising 475 basis points to 17.32% in October 2011, and
78 abating to 14.67% in February 2012 which is still 210 basis points higher than in
79 April 2010, as shown on page 5 of IAWC Exhibit 10.02R. As noted above, the
80 Blue Chip consensus forecasted yields on 30 year U.S. Treasury Bonds have
81 fallen 140 basis points from 5.30% on April 1, 2010 to 3.42% on March 1, 2012,
82 implying an expected market equity risk premium in early April 2010 of 7.27%,
83 rising to an expected market equity risk premium of 11.25% in late February
84 2012, 698 basis points higher than the expected market equity risk premium of
85 7.27% in April 2010, as shown on page 6.

86 Hence, notwithstanding lower interest rates, the cost of common equity
87 has actually risen as the equity risk premium has risen.

88
89 **Q7. Is there any other indication that Ms. Freetly's recommended ROE**
90 **materially understates the investors' required ROE for the water utility**
91 **industry, generally, and IAWC, specifically?**

³ George M. Constantinides, "Understanding the Equity Risk Premium Puzzle", in Rajnish. Mehra, Ed. Handbook of the Equity Risk Premium Puzzle, Elsevier, Amsterdam, 2008, p. 349.

92 A. Yes. The Predictive Risk Premium Model™ (“PRPM™”), recently published in
 93 the *Journal of Regulatory Economics* (“JRE”)⁴, can be used to provide such an
 94 indication. The PRPM™ was developed from the work of Robert F. Engle who
 95 shared the Nobel Prize in Economics in 2003 “for methods of analyzing
 96 economic time series with time-varying volatility (ARCH)⁵ with “ARCH” standing
 97 for autoregressive conditional heteroskedasticity. In other words, volatility
 98 changes over time and is related from one period to the next, especially in
 99 financial markets. Engle discovered that the volatility in prices and returns
 100 cluster over time. Therefore, high and low volatility periods can be used to
 101 predict equity risk premiums. The PRPM™ estimates the risk / return
 102 relationship directly, as the predicted equity risk premium is generated by the
 103 prediction of volatility, i.e., risk.

104 The inputs to the model are the historical returns on the common shares
 105 of each water company in Ms. Freetly’s water utility sample minus the historical
 106 monthly yield on long-term U.S. Treasury securities. Using a generalized form of
 107 ARCH, known as GARCH, each water company’s projected equity risk premium
 108 was determined using Eviews® statistical software. The forecasted 30-year U.S.
 109 Treasury Bond (“Note”) yield based upon the consensus forecast derived from
 110 March 1, 2012 *Blue Chip*, or 3.42%, which was then added to each company’s
 111 PRPM™ derived equity risk premium. IAWC Exhibit 10.03R presents the results
 112 for each company as well as the group average. The PRPM™ indicated

⁴ “A New Approach for Estimating the Equity Risk Premium for Public Utilities”, Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. *The Journal of Regulatory Economics* (December 2011), 40:261-278. (IAWC Exhibit 10.04R)

⁵ www.nobelprize.org

common equity cost rates range from 9.26% to 16.53% with an average 11.53%.

A common equity cost rate of 11.53% demonstrates the inadequacy of Ms.

Freetly's recommended ROE of 9.35%.

Q8. Please comment upon Ms. Freetly's common equity cost rate analysis.

A. I have three concerns with Ms. Freetly's common equity cost rate determination.

First, Ms. Freetly's use of a non-water utility sample group is not appropriate for

determining the cost rate of common equity for IAWC. Moreover, her exclusion

of American Water Works, Co., Inc. (American Water) and SJW Corp. from her

water sample group results in the exclusion of valuable insight into the cost of

common equity for the water industry as a whole. Second, in her DCF analysis,

Ms. Freetly relied upon a non-constant growth DCF model, even though the utility

industry, specifically the water utility industry, is a stable and mature industry.

Third, in her CAPM analysis, Ms. Freetly relied upon an historical spot 30-year

U.S. Treasury bond yield as the risk-free rate, rather than an actual projection of

the 30-year U.S. Treasury bond yield, and failed to include the empirical CAPM

("ECAPM") to account for the fact that the Security Market Line ("SML") as

described by the traditional CAPM is not as steeply sloped as the predicted SML.

In addition, her analysis does not include a business and financial risk

adjustment nor a flotation cost adjustment as discussed in my Direct Testimony.

As a result of these factors, Ms. Freetly's recommended overall rate of

return, combined with her proposed capital structure, would result in a grossly

inadequate allowed return on common equity when applied to IAWC's actual

common equity ratio.

B. Ms. Freetly's Sample Groups

Q9. Do you have any comment upon Ms. Freetly's use of a non-water utility sample group in addition to a water utility sample group?

A. Yes. Ms. Freetly's use of a non-water utility sample group is inappropriate because, as shown on IAWC Exhibits 10.02 and 10.03, the water utility industry faces unique investment risks relative to the electric, combination electric and gas and natural gas utility industries. In addition, as shown on page 1 of IAWC Exhibit 10.05R, IAWC's 2010 capital intensity as measured by net plant divided by total operating revenues of \$3.70 relative to \$2.08 for her non-water utility sample group indicates significantly greater capital intensity and thus greater risk. Also, on pages 3 – 5 of IAWC Exhibit 10.05R, it is clear that based upon total debt to earnings before interest, taxes, depreciation and amortization ("EBIDTA"), before-income tax interest coverage and earned returns on common equity for the ten years ending 2010, IAWC is clearly more risky, notwithstanding a 2010 depreciation rate similar to that of Ms. Freetly's non-water utility sample. Using a proxy group comprised of non-water utilities for an ROE analysis for a water company, like IAWC, cannot reflect specific water industry risk, and is therefore inadequate for water utility cost of capital purposes. Consequently, I find it unnecessary to discuss the results pertaining to Ms. Freetly's non-water utility sample group because those results are neither reflective of the unique risks of water utilities in general, nor of IAWC, specifically.

C. Discounted Cash Flow Analysis

Q10. Ms. Freetly relies upon a non-constant growth DCF model, in part, to arrive at her recommended common equity cost rate of 9.35%. Please comment.

160 **A.** Ms. Freetly has not provided sufficient evidentiary support for her non-constant
161 growth model in this case. Ms. Freetly utilizes the non-constant growth DCF
162 model based on her belief that “the average 3-5 year growth rates for her Water
163 and Utility samples are not sustainable over the long-term” as she states on page
164 15, lines 272 - 274 of ICC Staff Exhibit 6.0. She provides the following three
165 reasons on lines 280 - 287 on page 15, (1) “[i]n theory, no company could sustain
166 indefinitely a growth rate greater than that of the overall economy”; (2) “since
167 utilities in particular are generally below-average growth companies, the
168 sustainability of an above average growth rate is particularly dubious”; and, (3)
169 “[g]iven that the average growth rate for my Water sample companies was
170 greater than the overall growth expectations for the economy, the sustainability of
171 the average 3-5 year growth rates for my Water sample is unlikely.” However,
172 these conclusions are not supported by academic literature or empirical
173 evidence.

174 **Q11. Please explain why it is inappropriate to rely upon a non-constant growth**
175 **DCF analysis?**

176 **A.** As discussed in my Direct Testimony, on page 36, line 921 through page 31, line
177 941, it is neither necessary nor appropriate to use a non-constant version of the
178 DCF model because utilities, and specifically water utilities, are generally in the
179 mature stage of their lifecycles and not transitioning from one growth stage to
180 another. While all companies go through typical growth cycles (progressing from
181 an initial high growth stage through a transitional stage and finally assuming a
182 steady-state or constant growth state), the U.S. public water utility industry is in

the steady-state or constant growth state. The regulated economics of the water utility industry further reflect the features of this relative stability and demand maturity. Contributing to the stability and maturity of the public water utility industry is the fact that their returns on capital investment, or rate base, are set through a ratemaking process and not determined in the market place. Hence, there is no basis for applying non-constant growth versions of the DCF model to determine the cost rate of common equity of mature public utility companies. Under the circumstances of this case, the constant growth model is most appropriate.

Q12. Why is it inappropriate to use growth in GDP in a non-constant growth DCF analysis?

A. There is no empirical evidence of which I am aware from which one could conclude that any individual company, especially the relatively stable and mature utility companies, will grow at the average historical or projected growth rate of the U.S. economy. The average growth in the U.S. economy is just that, an average. Some companies will grow faster and some will grow more slowly. IAWC Exhibit 10.06R shows nominal GDP for the years 2001 - 2010 as a whole and by industry. From 2009 - 2010, nominal GDP grew 3.83%, and 4.73% on average for the nine years ending 2010. In contrast, the construction component of nominal GDP declined 5.93% from 2009 - 2010 and grew a meager 0.34% on average for the nine years ending 2010. The utilities component of nominal GDP grew 2.83% from 2009 - 2010 and an average 6.14% for the nine years ending 2010. Hence, utilities experienced greater than average growth during the past

decade. In view of the above, as well as the maturity and stability of the public utility industry, there is no valid rationale in this case for undertaking a non-constant growth DCF analysis.

Q13. Why are five year growth rate projections in EPS made by security analysts reasonable to use in a constant growth, single stage DCF?

A. Security analysts' forecasts take into account historical information as well as all current information likely to impact the future, which is critical since both cost of capital and ratemaking are prospective. Myron Gordon, who first introduced the DCF model adopted for utility ratemaking, came to recognize long after his book, The Cost of Capital to a Public Utility was published in 1974, that the growth component of his original "Gordon Model" (which relied upon the sustainable growth method) had a serious limitation by assuming that dividend expectations can be represented by retention growth. Dr. Gordon, in a presentation on March 27, 1990 (some 16 years after the publication of his 1974 book), before the Institute for Quantitative Research In Finance, in Palm Beach, Florida, entitled, The Pricing of Common Stocks, stated that analysts' growth rate projections were superior to the sustainable growth method:

The most serious limitation of the Gordon Model is the assumption that the dividend expectation can be represented with just two parameters, D and br ... We have seen that earnings and growth estimates by security analysts were found by Malkiel and Cragg to be superior to data obtained from financial statements for the explanation of variation in price among common stocks. That is, better estimates are obtained for the coefficient of the various explanatory variables. *...estimates by security analysts available from sources such as IBES are far superior to the data available to Malkiel and Cragg. Secondly, the estimates by security analysts must be superior to the estimates derived solely from financial statements.* (italics added)

235

236 Also, Morin addresses critics of analysts' growth rates⁶:

237 Because of the dominance of institutional investors and their
 238 influence on individual investors, analysts' forecasts of long-run
 239 growth rates provide a sound basis for estimating required returns.
 240 Financial analysts exert a strong influence on the expectations of
 241 many investors who do not possess the resources to make their
 242 own forecasts, that is, they are a cause of g. The accuracy of
 243 these forecasts in the sense of whether they turn out to be correct
 244 is not at issue here, as long as they reflect widely held
 245 expectations. As long as the forecasts are typical and/or influential
 246 in that they are consistent with current stock price levels, they are
 247 relevant. The use of analysts' forecasts in the DCF model is
 248 sometimes denounced on the grounds that it is difficult to forecast
 249 earnings and dividends for only one year, let alone for longer time
 250 periods. This objection is unfounded, however, because it is
 251 present investor expectations that are being priced; it is the
 252 consensus forecast that is embedded in price and therefore in
 253 required return, and not the future as it will turn out to be.

254

255 Published studies in the academic literature demonstrate that
 256 growth forecasts made by security analysts represent an
 257 appropriate source of DCF growth rates, are reasonable indicators
 258 of investor expectations and are more accurate than forecasts
 259 based on historical growth. These studies show that investors rely
 260 on analysts' forecasts to a greater extent than on historic data
 261 only.

262
 263 Studies performed by Cragg and Malkiel⁷ also demonstrate that analysts'
 264 forecasts are superior to historical growth rate extrapolations. As noted on page
 265 41 of my Direct Testimony, while some question the accuracy of analysts'
 266 forecasts of EPS growth, the accuracy of those forecasts well after the fact does

⁶ Morin, Roger A., *New Regulatory Finance*, 128-129 (Public Utilities Reports 2006).

⁷ Cragg, John G. and Malkiel, Burton G. *Expectations and the Structure of Share Prices* (University of Chicago Press, 1982) Chapter 2 (Ahern Workpaper 13).

not really matter. What is important is that they influence investors and hence the market prices they pay.

Burton A. Malkiel⁸ affirmed his belief in the superiority of analysts' earnings forecasts when he testified before the Public Service Commission of South Carolina in November 2002⁹:

With all the publicity given to tainted analysts' forecasts and investigations instituted by the New York Attorney General, the National Association of Securities Dealers, and the Securities & Exchange Commission, I believe the upward bias that existed in the late 1990s has indeed diminished. In summary, I believe that current analysts' forecasts are more reliable than they were during the late 1990s. Therefore, analysts' forecasts remain the proper tool to use in performing a Gordon Model DCF analysis.

Moreover, there is no empirical evidence that investors would discount or disregard analysts' estimates of growth in earnings per share. "Do Analyst Conflicts Matter? Evidence From Stock Recommendations,"¹⁰ provided in IAWC Exhibit 10.07R, examined whether conflicts of interest with investment banking ["IB"] and brokerage businesses induced sell-side analysts to issue optimistic stock recommendations and whether investors were misled by such biases. The authors conclude that perceptions of analysts' bias do not mislead investors:

Overall, our empirical findings suggest that while analysts do respond to IB and brokerage conflicts by inflating their stock

⁸ Malkiel, Burton A., the Chemical Bank Chairman's Professor of Economics at Princeton University and author of the widely-read national bestselling book on investing entitled, "A Random Walk Down Wall Street: The Time-Tested Strategy for Successful Investing (Completely Revised and Updated)" (W.W. Norton & Co. 2011).

⁹ Re: South Carolina Electric & Gas Co., Docket No. 2002-223-E "Rebuttal Testimony", pp. 16-17 (S.C.P.S.C. Nov. 2002).

¹⁰ Agrawal, Anup and Chen, Mark A., "Do Analysts' Conflicts Matter? Evidence from Stock Recommendations", (Journal of Law and Economics, August 2008), Vol. 51.

recommendations, the market discounts these recommendations after taking analysts' conflicts into account. These findings are reminiscent of the story of the nail soup told by Brealey and Myers (1991), except that here analysts (rather than accountants) are the ones who put the nail in the soup and investors (rather than analysts) are the ones to take it out. Our finding that the market is not fooled by biases stemming from conflicts of interest echoes similar findings in the literature on conflicts of interest in universal banking (for example, Kroszner and Rajan, 1994, 1997; Gompers and Lerner 1999) and on bias in the financial media (for examples, Bhattacharya et al. forthcoming; Reuter and Zitzewitz 2006). Finally, while we cannot rule out the possibility that some investors may have been naïve, our findings do not support the notion that the marginal investor was systematically misled over the last decade by analysts' recommendations.

As discussed in my Direct Testimony, the market is efficient. Investors are presumptively aware of all publicly-available information, including the many available security analysts' earnings growth forecasts. Investors are also aware of the accuracy of past forecasts, whether for earnings or dividend growth or interest rates. Investors have no knowledge of the accuracy of a forecast at the time of their investment decision. Whether a forecast is accurate can only be known after the period being forecast has elapsed.

Hence, security analysts' earnings projections should be used in a cost of common equity analysis. They should be used because security analysts' earnings growth rate projections are available to investors and investors know whether and to what degree these projections are accurate. Staff would have us ignore this reality by disregarding the largest influence on individual investors, who own approximately 54% (see IAWC Exhibit 10.08) of all the common shares, on average, of the companies in my proxy group of nine water companies. Rate of return analysts, such as Ms. Freetly and myself, who attempt to emulate investor behavior, should not ignore how investors behave.

Q14. What would the results of a single-stage constant growth DCF analysis be for Ms. Freetly's water sample group?

A. On IAWC Exhibit 10.08R, I have applied a single-stage constant growth DCF analysis using Ms. Freetly's expected DPS, market price as well as Zacks' 3 - 5 EPS growth rate estimates and Reuters' long-term EPS growth rates. Such an application yields an average indicated DCF common equity cost rate of 10.64% for Ms. Freetly's water sample group. However, a DCF-derived common equity cost rate of 10.64% is understated and not applicable to IAWC, because it does not reflect IAWC's unique business risks, flotation costs or the significantly greater financial risk inherent in her recommended capital structure relative to her water sample group.

D. Risk Premium Analysis

Q15. Do you have any comment regarding Staff's application of the CAPM?

A. Yes. Staff's application of the CAPM is flawed in two specific respects; (1) the use of a historical yield on 30-year U.S. Treasury bond as the risk-free rate; and, (2) the failure to apply the ECAPM to account for the fact that the Security Market Line (SML) as described by the traditional CAPM is not as steeply sloped as the predicted SML.

Q16. Ms. Freetly utilized a 3.03% February 1, 2012 effective yield on 30-year U.S. Treasury Bonds as the risk-free rate in her risk premium or CAPM analysis. Is this appropriate?

A. No. Ms. Freetly's use of a spot 30-year U.S. Treasury Bond yield is inconsistent with both the prospective nature of the cost of capital and ratemaking as well as the EMH discussed above, because it merely provides a snapshot of yields at a

point in time. Prospective yields may be derived from various forecasts that are widely and readily available, such as the forecasted 30-year U.S. Treasury Bond (note) yields from the March 1, 2012 Blue Chip shown in IAWC Exhibit 10.09R. Note 1 on IAWC Exhibit 10.09R derives a forecasted yield of 3.42% based upon the consensus forecast of about 50 economists for the six calendar quarters ending with the second calendar quarter of 2013. Investors are more likely to rely on this information than information on spot yields.

Q17. You have stated that Ms. Freetly also failed to apply the ECAPM to account for the fact that the Security Market Line (SML) as described by the traditional CAPM is not as steeply sloped as the predicted SML. Please explain.

A. The SML is a graphical depiction of the CAPM risk-return relationship, where the vertical axis depicts increasing returns and the horizontal axis depicts increase risk as measured by beta. The intercept of the vertical axis represents the required return on an asset with zero risk (or a zero-beta asset), meaning a return equal to the risk-free rate. The SML slopes upward as beta (risk), increases. As beta increases, the required return increases, consistent with the financial precept of risk and return, i.e., that investors require a greater return for bearing greater risk. As discussed in my Direct Testimony, while numerous tests of the CAPM have confirmed its validity, these tests have also determined that “the implied intercept term exceeds the risk-free rate and the slope term is less

than predicted by the CAPM.”¹¹ In other words, the traditional CAPM does not fully capture the greater returns required by increased risk.

Q18. What would Ms. Freetly’s CAPM results have been had she relied upon a forecasted risk-free rate as well as the ECAPM?

A. In the top half of IAWC Exhibit 10.09R, I have derived the traditional CAPM (the version applied by Ms. Freetly) using a Blue Chip forecasted risk-free rate of 3.42%. This results in a traditional CAPM-derived common equity cost rate of 9.37% for her water sample group. In the bottom half of IAWC Exhibit 10.09R, I have derived an ECAPM, based upon the forecasted risk-free rate. The ECAPM-derived common equity cost rate is 10.33% for the water sample group.

The average of the traditional CAPM results of 9.37% and the ECAPM results of 10.33% is 9.85%.

E. Recommended Common Equity Cost Rate

Q19. What would Ms. Freetly’s recommended common equity cost rate be if she were to have used the single-stage constant growth DCF analysis and correctly applied CAPM as discussed above?

A. Averaging the single-stage constant growth DCF results of 10.64% with the average CAPM results of 9.85% derived above, results in a common equity cost rate of 10.25%¹².

Q20. Is there a way to quantify an investment risk adjustment due to IAWC’s greater business risk relative to Ms. Freetly’s Water Sample Group?

¹¹ Morin 175.

¹² $10.25\% = ((10.64\% + 9.85\%) / 2)$.

A. As discussed in detail at pages 21 - 27 of my Direct Testimony, there is no direct way to quantify an investment risk adjustment due to IAWC's unique investment risks (due to regulatory risks specific to Illinois, the availability and quality of IAWC's water supply, flood risk, environmental risks and risks related to the nature of certain customers). However, in my informed expert judgment, an upward adjustment of 0.25% is warranted.

Q21. You also previously noted that Ms. Freetly did not reflect flotation costs in her recommended common equity cost rate. Please comment

A. As discussed in my Direct Testimony, it is necessary to include flotation costs, i.e., those costs associated with the sale of new issuances of common stock, in the common equity cost rate recommendation. There is no other mechanism in the ratemaking paradigm with which such costs can be recovered. Using the methodology described on page 79, lines 2038 - 2057 of my Direct Testimony, and in IAWC Exhibit 10.17 based upon the single-stage constant growth DCF cost rate of 10.64% derived above, a flotation cost adjustment of 0.15% results.

Q22. Please describe the degree of financial risk inherent in Ms. Freetly's recommended capital structure ratios relative to her Water Sample Group.

A. Ms. Freetly's recommended capital structure contains 56.70% long-term debt, 1.30% short-term debt and 42.00% common equity. The average 2010 capital structure ratios maintained by the companies in her water sample group are 46.75% long-term debt, 6.05% short-term debt, 0.19% preferred stock and 47.01% common equity as shown on IAWC Exhibit 10.10R. As discussed in my Direct Testimony, at page 27, line 696 through page 28, line 702 financial risk is

defined as the additional risk created by the introduction of senior capital, i.e., debt and preferred stock, into the capital structure. The higher the proportion of senior capital in the capital structure, the higher the financial risk which must be factored into the common equity cost rate, consistent with the basic financial principle of risk and return, i.e., investors demand a higher common equity return as compensation for bearing higher investment risk. Since Ms. Freetly's recommended capital structure for IAWC contains 58.00% total debt (56.70% long-term debt + 1.30% short-term debt) and the water sample group average capital structure contains 52.80% senior capital (46.75% long-term debt + 6.05% short-term debt), Ms. Freetly's capital structure contains a significantly greater financial risk which must be factored into her common equity cost rate. Her cost of equity analysis, however, has failed to account for this.

Q23. Is there a way to quantify a financial risk adjustment due to the greater financial risk inherent in Ms. Freetly's recommended capital structure ratios?

A. Yes. Should the ICC adopt Ms. Freetly's recommended capital structure, it is necessary to upwardly adjust the common equity cost rate based upon her water sample group to reflect the greater financial risk inherent in her recommended capital structure ratios. An indication of the magnitude of the necessary financial risk adjustment is given by the Hamada equation¹³, which un-levers and then re-levers betas based upon changes in capital structure.

¹³ Brigham, Eugene F. and Daves, Phillip R., Intermediate Financial Management, (Thomson-Southwestern, 2007) 533.

The Hamada equation un-levers the median beta of Ms. Freetly's water sample group of 0.61 with an average December 31, 2010 total equity ratio of 47.20% to 0.35 when applied to a 100% common equity ratio and then levers the beta to 0.66 using Ms. Freetly's recommended total debt ratio of 58.00%. The re-levered beta, applied to a 9.76% market risk premium and a 3.42% risk-free rate translates to a 9.86%¹⁴ common equity cost rate. The difference between the 9.86% relevered beta common equity cost rate and the result of the traditional CAPM for the proxy group with a median beta of 0.61, 9.37%¹⁵ is a 0.49%. An upward financial adjustment of 0.49%, reflects the significantly higher financial risk of Ms. Freetly's common equity ratio of 42.00% compared with the water sample group's average total equity ratio of 47.20% at September 30, 2013. The Hamada Equation and calculations are as follows:

$$b_l = b_u [1 + (1 - T)(D / S)]$$

Where b_l = Levered beta

b_u = Un-levered beta

T = Tax Rate

(D / S) = Debt to Common Equity Ratio

To un-lever the beta from a 47.20% average proxy group total equity ratio, the following equation is used:

$$0.61 = b_u [1 + (1 - 0.35) (52.80/47.20\%)]$$

When solved for b_u , $b_u = 0.35$, indicating that the beta for the proxy group of nine water companies would be 0.35 if their average capital structure contained 100% total equity.

¹⁴ 9.86% = (0.66 x 9.76%) + 3.42%.

¹⁵ 9.37% = (0.61 x 9.76%) + 3.42%.

To re-lever the beta relative to Ms. Freetly's recommended common equity ratio, the following equation is used:

$$b_l = 0.35 [1 + (1 - 0.35) (58.00\%/42.00\%)]$$

When solved for b_l , $b_l = 0.66$, indicating that the beta for the water sample group would be 0.66, if their average capital structure contained 42.00% total equity.

Q24. Based upon the corrected DCF and CAPM discussed previously, what would Ms. Freetly's recommendation be once flotation costs, IAWC's greater business risks due to its unique risks, and the greater financial risk inherent in her recommended capital structure are reflected?

A. The corrected average DCF and CAPM common equity cost rates of 10.25%, when coupled with a flotation cost adjustment of 0.15%, a business risk adjustment of 0.25% and a financial risk adjustment of 0.49%, would be 11.14% ($11.14\% = 10.25\% + 0.15\% + 0.25\% + 0.49\%$).

F. Revenue Decoupling Mechanism (RAC)

Q25. Ms. Freetly states on page 40, lines 740 through 744, that "If the Commission approves the Company's proposed RAC, then a downward adjustment to my cost of equity recommendation for IAWC would be appropriate since my cost of common equity recommendations are based on the Company's risk without Commission approval of RAC." Please comment.

A. Empirical evidence utilizing the previously discussed Predictive Risk Premium Model ("PRPMTM")¹⁶ as well as testing for the differences in beta before and after

¹⁶ "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011),

479 decoupling¹⁷ concludes that there is no measurable difference in the volatility of
480 equity risk premiums or in systematic risk as measured by beta due to the
481 existence of a RAC. Hence such an adjustment cannot be quantified. It cannot
482 be quantified in all likelihood due to a myriad of factors collectively affecting
483 investor perceptions of risk.

484 Nor is there regulatory precedent for an adjustment to a water utility's cost
485 of capital due to the presence of such a RAC. To the best of my knowledge,
486 New York and California are the only two states where some or all of the
487 jurisdictional water utilities have RACs or RAC-like mechanisms in place. The
488 New York Public Service Commission does not reduce the authorized return on
489 common equity to reflect the existence of the RAC. Neither does the Public
490 Utilities Commission ("PUC") of the State of California.

491 Although Ms. Freetly attempts to empirically quantify the impact of the
492 risk reduction she perceives relative to the adoption of the RAC, in the final
493 analysis, her 10 basis points reduction is indeed ad hoc and arbitrary. Thus,
494 having provided no empirical support quantifying the 10 basis point adjustment
495 as reasonable, it should be rejected in this proceeding.

496 **IV. RESPONSE TO MS FREETLY'S COMMENTS**

497 **A. Use of Historical Data**

40:261-278. (IAWC Exhibit 10.04R)

¹⁷ Decoupling: Impact on the Risk of Public Utility Stocks, Richard A. Michelfelder, Ph.D., presented at the Society of Utility Regulatory and Financial Analysts' 43rd Financial Forum, April 15, 2011. (IAWC Exhibit 10.11R).

Q26. On page 42, line 797 through page 43, line 814 of ICC Staff Exhibit 6.0, Ms. Freetly comments upon your use of historical data in the your application of the DCF, CAPM and RPM. Please comment.

A. As Ms. Freetly notes on page 2 of ICC Staff Exhibit 6.0 at lines 29 - 31, “ratepayers interests are served best when the authorized rate of return on rate base equals the utility’s overall cost of capital.” To do so requires rate of return analysts, such as myself and Ms. Freetly, to emulate investor behavior. Absent empirical evidence to the contrary, it is reasonable to assume that investors utilize the types of historical data in arriving at their expectations and required returns as I have used I in my DCF, CAPM and RPM applications.

Q27. Please comment on Ms. Freetly’s statement on page 42 line 797 through page 43, line 799, that “[h]istorical data reflects [sic] conditions that may not continue in the future?”

A. The use of the words “may not” implies the converse as well – namely that historical data reflect conditions that may continue in the future. Moreover, as discussed in my Direct Testimony, Ibbotson Associates indicate that while past actual events are not likely to be repeated in the future, the event-types of a period can be expected to recur¹⁸. On page 59 of SBBI – 2011 (page 12 of IAWC Exhibit 10.12R), it states the following regarding the use of historical data in evaluating investors’ return expectations:

Finally, because historical event-types (not specific events) tend to repeat themselves, long-run capital market return studies can reveal a great deal about the future. Investors probably expect

¹⁸ Ibbotson® SBBI® 2011 Valuation Yearbook – Market Results for Stocks, Bonds, Bills, and Inflation – 1926 -2010 (SBBI – 2011), Morningstar, Inc., 2011, Chicago, IL 59

“unusual” events to occur from time to time, and their return expectations reflect this.”¹⁹ (footnote omitted) (emphasis added)

Ms. Freetly is also incorrect when she states at lines 800 - 801 on page 43 that the use of “average historical data wrongly implies that securities data will revert to a mean.” She is correct when she states that security return movements approximate a random walk. But as the SBBI – 2011 studies of long-term historical market returns and equity risk premiums indicate, both are randomly generated²⁰. In addition, statistically speaking, the average, specifically the arithmetic mean, is the best estimate of the next expected value of a randomly generated data series – such as historical market returns and equity risk premiums. SBBI – 2011 state on page 11 of IAWC Exhibit 10.12R:²¹

Our own empirical evidence suggests that the yearly difference between the stock market total return and the U.S. Treasury bond income return in any particular year is random. Graph 5-2, presented earlier, illustrates the randomness of the realized equity risk premium

A statistical measure of the randomness of a return series is its serial correlation. Serial correlation (or autocorrelation) is defined as the degree to which the return of a given series is related from period to period. . . . A serial correlation near zero indicates that returns are random and unpredictable from one period to the next period and are positively related.

SBBI – 2011 then reports that the serial correlation for both the large company stock total returns and the equity risk premium is 0.02 which indicates “that the returns are random or unpredictable from one period to the next.”

¹⁹ SBBI – 2011) 58

²⁰ Id., p. 74.

²¹ Id., p. 75.

Hence, use of average, specifically the arithmetic mean, historical market return and equity risk premium data does not imply mean reversion; rather it is the best estimate of the next expected value of the data in question. In other words, using the arithmetic mean of randomly generated data, such as long-term historical stock market returns or equity risk premiums, is forward looking, expectational and entirely appropriate for a cost of capital determination.

Q28. Please comment upon Ms. Freetly' citation from Burton G. Malkiel's book A Random Walk Down Wall Street.

A. Ms. Freetly has taken the referenced sentence out of context. The quotation by Malkiel found on page 45, lines 872-874 of ICC Staff Exhibit 6.0 in its full context is as follows:

"A random walk is one in which future steps or directions cannot be predicted on the basis of past actions. When the term is applied to the stock market, it means that short-run changes in stock prices cannot be predicted."²² (emphasis added)

Short-run changes in stock prices are not what rate of return analysts such as myself and Ms. Freetly are attempting to derive in our analyses of the cost of common equity. We are trying to emulate investor behavior, using data available to us and to investors, in an attempt to arrive at an expert opinion of long-run investor expectations, which are not directly observable or measurable. In doing so, we use proxies for investor growth rate expectation information such as Value Line Investment Survey (Value Line), Reuters, Zacks and Yahoo! Finance forecasted EPS growth rates. And, as discussed above, the arithmetic mean

²² Burton G. Malkiel, A Random Walk Down Wall Street, W. W. Norton & Company, 2007, p. 16.

long-term historical equity risk premiums, statistically speaking, is the best estimate of the next expected equity risk premium and therefore, as a proxy for the investor-expected equity risk premium.

B. Constant Growth DCF

Q29. Ms. Freetly criticizes your inclusion of a constant growth DCF in your analysis. Please comment.

A. At line 810, page 43 through page 44, line 822 of ICC Staff Exhibit 6.0, Ms. Freetly criticizes my inclusion of a constant growth DCF because it is her opinion that the growth rate used in my application of the constant growth DCF-- analysts' forecasted growth in EPS -- is not sustainable. However, in my experience, a single-stage constant growth DCF model is the most widely utilized version of the DCF used in public utility rate regulation. It is widely utilized because utilities are generally in the mature stage of their lifecycles and not transitioning from one growth stage to another. This is especially true for water utilities.

Moreover, as previously discussed in this rebuttal testimony, there is a wealth of empirical and academic literature which supports the superiority of analysts' forecasts of EPS as measures of investor growth expectations in a DCF analysis. The use of earnings growth rates, i.e., earnings expectations, in a DCF provides a better matching between investors' market appreciation expectations which are implicit in market prices and the growth rate component of the DCF, because they have a significant influence on market prices which affect market price appreciation and hence, the "growth" experienced by investors. This

should be evident even to relatively unsophisticated investors just by listening to financial news reports on radio, TV or reading the newspapers.

Q30. Ms. Freetly also criticizes analysts' EPS growth forecasts as being unsustainable and above average. Please comment.

A. Ms. Freetly's criticism is based upon a comparison of analysts' EPS growth forecasts with expected growth in the economy, as measured by GDP, of approximately 4.81% as stated on lines 817 - 818 on page 43 of ICC Staff Exhibit 6.0. I have previously discussed how the average growth in the U.S. economy is just that, an average. Therefore, I will not repeat that entire discussion here.

In addition, implied in Ms. Freetly's criticism that analysts' EPS growth forecasts are above average, is the presumption that a DCF analysis utilizing analysts' EPS growth estimates as the growth rate would be biased upward. However, Eugene G. Fama and Kenneth R. French have concluded, based upon a review of average stock returns from 1951 to 2000 relative to expected returns using the DCF model including earnings growth rates, that the results from the earnings growth based DCF model are actually biased downward.²³ They state on pages 643 and 658 (pages 8 and 23 of IAWC Exhibit 10.13R):

The 1951 to 2000 estimates of the expected stock return and the equity premium from the earnings growth model, 6.51 percent and 4.32 percent, are higher than for the dividend growth model. But they are well below the estimates from the average return, 9.62 percent and 7.43 percent. . . . If we are interested in the unconditional expected annual simple return, the estimates for 1951 to 2000 from fundamentals are downward biased. The bias is rather large when the average growth rate of dividends is used to estimate the expected rate of capital gain, but it is small for the average growth rate of earnings.

²³ Eugene F. Fama & Kenneth R. French, "The Equity Premium", *The Journal of Finance*, Vol. 57, No. 2 (Apr., 2002), pp. 637 – 659.

In view of all the foregoing, security analyst's forecasts of EPS growth should receive substantial, if not exclusive, weight when estimating today's market cost of capital, which is why it is entirely appropriate to include a constant growth DCF model when estimating the cost of common equity for IAWC.

C. Investment Risk Adjustment

Q31. Ms. Freetly also criticizes your investment risk adjustment. Please comment.

A. Ms. Freetly claims that since I "failed to put forward any analysis to demonstrate the higher relative risk of IAWC relative to her proxy group, no investment risk adjustment should be included in the cost of common equity" (IAWC Staff Exhibit 6.0, p.44). As Ms. Freetly notes, I do state that there is no direct way to quantify an adjustment for the combined impact on common equity cost rate of IAWC's somewhat lower financial risk and greater unique business risks as described in the Direct Testimony of Barry L. Suits (IAWC Exhibit 2.00 (Rev.)) and summarized on pages 21 – 25 in mine (IAWC Exhibit 10.00 (Rev.)), an indication of such an adjustment can be based upon IAWC's smaller size relative to the proxy group as discussed on page 25, line 635 through page 26, line 27.

An indication of the magnitude of such an adjustment for IAWC's collective unique business risk can be derived based upon data contained in Chapter 7 entitled "Firm Size and Return"- from SBBI - 2011. The determinations are based on the size premiums for decile portfolios of New York Stock Exchange (NYSE), American Stock Exchange (AMEX) and NASDAQ listed companies for the 1926-2011 period and related data shown on pages 3 through 14 of IAWC

Exhibit 10.14R. The average size premium for the 6th decile in which the proxy group falls has been compared to the average size premium for the 7th and 8th deciles in which IAWC would fall if its stock were traded and sold at the March 9, 2012 average market/book ratio of 191.4% for the proxy group of nine water companies. As shown on page 1 of IAWC Exhibit 10.15R, the size premium spread between IAWC and the nine water companies is 0.39%.

Consequently, a business risk adjustment of 0.39% is indicated for the nine water companies. However, I have made a conservative business risk adjustment of only 0.25% to reflect IAWC's greater business risk due to not only its small size but also due to the regulatory risk associated with operating in Illinois, the availability and quality of its water supply, and its concentration of sales for resale customers, coupled with its need to replace ongoing infrastructure as discussed in my Direct Testimony and in Mr. Suits' Direct Testimony.

D. Flotation Cost Adjustment

Q32. Ms. Freetly also criticizes your flotation cost adjustment. Please comment.

A. Ms. Freetly's criticism on page 44, lines 838 through page 45, line 841 of ICC Staff Exhibit 6.0 that the proposed "flotation costs are to be allowed only if a utility can verify both that it has incurred the specific amount of flotation costs for which it seeks compensation and that those costs have not been previously recovered through rates" is unfounded. It is important to reflect flotation costs in the cost rate of common equity because there is no other mechanism in the ratemaking paradigm with which such costs can be recovered. Because these costs are real

and legitimate, recovery of these costs should be permitted. As noted by Morin in IAWC Exhibit 10.15R:

The costs of issuing these securities are just as real as operating and maintenance expenses or costs incurred to build utility plants, and fair regulatory treatment must permit recovery of these costs....

The simple fact of the matter is that common equity capital is not free....[Flotation costs] must be recovered through a rate of return adjustment²⁴

Flotation costs should not be recognized only if incurred and not previously recovered through rates. Flotation costs are charged to capital accounts and are not expensed on a utility's income statement. As such, flotation costs are analogous to capital investments reflected on the balance sheet. Recovery of capital investments relates to the expected useful lives of the investment. Since common equity has a very long and indefinite life (assumed to be infinity in the standard regulatory DCF model), flotation costs should be recovered through an adjustment to common equity cost rate even when there has not been an issuance during the test year, or in the absence of an expected imminent issuance of additional shares of common stock.

In view of the foregoing, Ms. Freetly's criticisms of my flotation cost adjustment are unsupported and unwarranted.

V. IIWC/FEA WITNESS MICHAEL P. GORMAN

A. Current Capital Market Conditions

²⁴ Morin 321.

Q33. Please comment upon Mr. Gorman's comparison of the utility cost of capital in today's economic environment with that at the time of IAWC's last rate order.

A. On page 4, line 60 through page 5, line 76, Mr. Gorman asserts that the cost of capital for IAWC is "no higher today than it was" in IAWC's last rate case when the order was issued in April 2010. He bases this assertion on the decline of approximately 115-150 basis points in utility bond yields since IAWC's last rate case. All else equal, this would indicate an approximate 55.5 - 75 basis point decline in the cost of capital²⁵. As previously discussed, however, although utility bond yields have declined since April 2010, market equity risk premiums have risen, providing a clear indication that utility equity risk premiums have also risen. As shown on page 1 on IAWC Exhibit 10.16R, the projected market equity risk premium has risen 1.45%, from 7.60% in April 2010 to 9.05% in March 2012.²⁶

Likewise, the actual monthly market equity risk premium for the S&P 500 Composite Index (S&P 500) relative to 30-day U.S. Treasury Bill yields increased from 1.64% for April 2010 to 3.94% for February 2012. Using the actual monthly market equity risk premiums for the S&P 500 from July 1926 through April 2010 and February 2012, respectively, and the PRPM^{TM27} described in IAWC Exhibit 10.04R, predicted market equity risk premiums of 10.10% at April 2010 and

²⁵ Morin 128-129

²⁶ Based upon a forecasted total return derived from Value Line's 3-5 year average total market appreciation plus average annual forecasted dividend yield at the beginning of each month from April 2011 (the month of the order in IAWC's last rate case) through March 2012 minus the contemporaneous Blue Chip consensus estimate of about 50 economists of the expected yield on 30-year U.S. Treasury notes for the following six quarters, also, at the beginning of each month.

²⁷ "A New Approach for Estimating the Equity Risk Premium for Public Utilities", Pauline M. Ahern, Frank J. Hanley and Richard A. Michelfelder, Ph.D. The Journal of Regulatory Economics (December 2011), 40:261-278. (IAWC Exhibit 10.04R)

10.18% at February 2012 are indicated, which show an increase in the predicted market equity risk premium.

In view of the foregoing, Mr. Gorman's conclusion that utilities' cost of capital has declined based solely on a review of the trend in public utility bond yields is misleading and incomplete.

B. Proxy Group Selection

Q34. Do you have any comment upon Mr. Gorman's use of a gas utility proxy group in addition to a water utility proxy group?

A. Yes. Mr. Gorman's use of a gas utility proxy group is inappropriate because, as discussed in my Direct Testimony and shown on IAWC Exhibits 10.02 and 10.03, the water utility industry faces unique investment risks relative to the electric, combination electric and gas and natural gas utility industries. Using a proxy group comprised of natural gas distribution companies for an ROE analysis for a water company, like IAWC, cannot reflect specific water industry risk, and is therefore inadequate for water utility cost of capital purposes. Consequently, I find it unnecessary to discuss the results pertaining to Mr. Gorman's gas utility proxy group because those results are not reflective of the unique risks of water utilities in general, nor of IAWC, specifically.

C. Discounted Cash Flow Model (DCF)

Q35. Please comment upon Mr. Gorman's discussion of the results of his application of the constant growth, or single stage, DCF model.

A. Mr. Gorman, as shown on page 1 of IAWC/FEA Exhibit 1.5 and on page 21, Table 5 of IAWC/FEA Exhibit 1.0, derived an average constant growth DCF model cost rate of 10.18% for his water proxy group and a median of 10.36%. These cost

735 rates include a *negative* 1.15% constant growth DCF result for Middlesex Water
736 Company (Middlesex) because the single security analysts' forecast of EPS
737 growth for Middlesex is a *negative* 1.15% as shown on page 1 of IWC/FEA
738 Exhibit 1.-4. Since it is illogical that investors would invest with the expectation of
739 losing money, Middlesex's *negative* 1.15% DCF result is not meaningful. IAWC
740 Exhibit 10.17R recalculates Mr. Gorman's average and median constant growth
741 DCF results excluding Middlesex. They are 11.06% and 11.24%, respectively.

742 Nevertheless, Mr. Gorman concludes that the constant growth DCF result
743 for his water proxy group is unreasonably high on page 21, lines 384 and 385 of
744 IWC/FEA Exhibit 1.0 because it reflects a growth rate which he claims "is far too
745 high to be a reasonable or reliable estimate of a long-term sustainable growth
746 rate."

747 His conclusion is based upon his contention that projected growth in
748 Gross Domestic Product (GDP) "represents a ceiling, or high-end, sustainable
749 growth rate for a utility over an indefinite period of time", because the dividend
750 growth for the market as a whole tracked the GDP growth rate during the period
751 1926 through 2008. Those reasons, however, are not persuasive, as discussed
752 previously on pages 9 and 10 in this rebuttal testimony.

753 Hence, there is no basis for ultimately rejecting the corrected average
754 constant growth DCF cost rate of 11.06% or median cost rate of 11.24% for his
755 water proxy group.

Q36. Why are the three-to-five year growth rate projections made by security analysts in earnings per share reasonable to use in a constant growth DCF?

A. Mr. Gorman's statements are contradicted by his earlier testimony at page 19, line 353 through page 19, line 362 where he states the following:

[f]or purposes of determining the market-required return on common equity, one must attempt to estimate investors' consensus about what the dividend or earnings growth rate will be, and not what an individual investor or analyst may use to form individual investment decisions.

Security analysts' growth estimates have been shown to be more accurate predictors of future returns than growth rates derived from historical data. Assuming the market generally makes rational investment decisions, forward-looking growth projections are more likely to be the growth estimates considered by the market that influence observable stock price than are growth rates derived from only historical data alone.

As previously discussed in detail in this rebuttal testimony, there is a wealth of empirical and academic literature, including Cragg and Malkiel and Vander Weide and Carleton, which support the superiority of analysts' forecasts of EPS as measures of investor expectations.

Moreover, Myron Gordon, who first introduced the standard DCF model adopted for utility ratemaking, which both Mr. Gorman and I use, came to recognize that his original "Gordon Model" had a serious limitation by assuming that dividend expectations can be represented by retention growth. Dr. Gordon later came to the conclusion that security analysts' growth forecast in earnings per share were superior predictors of the variation in stock prices.

In all of the previously cited studies, the referenced analyst's growth forecasts were forecasts of growth in EPS. As the recent volatility of the stock market has shown, EPS is a prime, but not the sole, driver of market price movements. Therefore, analyst's forecasts of EPS growth are extremely relevant to investors in making their investments decisions. It is the goal of rate of return analysts, such as Mr. Gorman and myself (and as he agrees), to emulate investor behavior. Therefore, consistent with the EMH, which is the foundation of modern investment theory, market prices of securities reflect all relevant information at all times. This implies that prices adjust instantaneously to new information, such as analysts' forecasts of EPS growth.

In addition, as noted above, Agrawal and Chen conclude that analysts are not able to systematically mislead investors with optimistic stock recommendations.

Q37. At line 422, on page 23 through line 441, on page 24 of his Direct Testimony, Mr. Gorman cites page 67 of Morningstar, Inc.'s SBBI 2009 to support using GDP growth as a maximum sustainable growth rate. Please comment

A. The study reported in the SBBI 2009 relates growth in the earnings and dividends of the stock market as a whole to GDP growth from 1926-2008. Since the stock market as a whole, whether measured by the NYSE or the S&P 500, is a broad based representation of all the common stocks traded in the U.S., it stands to reason that the earnings and dividends of the market as a whole would track GDP growth. However, neither the SBBI – 2009 nor Mr. Gorman provide

any empirical support that the earnings and dividends of utility companies, in general, or water companies, in particular, or indeed any specific company or industry, track GDP growth.

Q38. On page 22, lines 412 – 414 of Mr. Gorman’s Direct Testimony, he states that “[h]ence, nominal GDP growth is a very conservative, albeit overstated, proxy for utility sales growth, rate base growth, and earnings growth.” Please comment.

A. As with Ms. Freetly, Mr. Gorman has provided no empirical evidence that in the third stage of a multi-stage DCF analysis any company, especially the relatively stable and mature utility companies, would grow at the average growth rate of the U.S. economy. In addition, it is a mismatch to use five- to ten-years growth in GDP as a proxy for the years eleven through perpetuity. There is no evidence that a five- to ten-years growth rate in GDP accurately represents the in perpetuity growth rate in GDP.

Hence, there is no valid rationale for undertaking a multi-stage DCF analysis.

Q39. Do you agree with Mr. Gorman’s use of a sustainable growth constant growth DCF analysis?

A. No. As shown on pages 1 and 2 of IWC/FEA Exhibit 1.8, Mr. Gorman calculates sustainable growth for each company in his water proxy group based upon 3-5 year projections from Value Line. His allowance for growth caused by the sale of new common stock above book value is also based upon the five-year growth in shares from 2010 through 2014-2016. Hence, Mr. Gorman’s sustainable growth

methodology is a short-term forecast, no longer than the security analysts' five-year forecasts of EPS growth used in his first consensus analyst's growth constant growth DCF analysis. Moreover, he has provided no empirical support that sustainable growth accurately represents investors' expected growth.

In addition, the sustainable growth methodology is inherently circular because it relies upon an expected ROE on book common equity which is then used in a DCF analysis to establish a common equity cost rate related to the market value of the common stock which, if authorized as the allowed ROE in this proceeding, will become the expected ROE on book common equity. Mr. Gorman's 9.58% sustainable growth constant growth DCF result, which forms the basis, in part, of his recommended allowed DCF derived ROE on book common equity, is lower than the expected average Value Line ROE of 10.57% shown on page 1 of IWC/FEA Exhibit 1.8 for the same proxy group used to derive his recommended allowed ROE. IAWC Exhibit 10.18R, an excerpt from Roger A. Morin's book New Regulatory Finance corroborates the circular nature of sustainable growth. Morin states the following on pages 306 and 307 (page 11-12 of IAWC Exhibit 10.18R):

There are three problems in the practical application of the sustainable growth method. The first is that it may be even more difficult to estimate what b , r , s and v investors have in mind than it is to estimate what g is they envisage. It would appear far more economical and expeditious to use available growth forecasts and obtain g directly instead of relying on four individual forecasts of the determinants of such growth. *It seems only logical that the measurement and forecasting errors inherent in using four different variables to predict growth far exceed the forecasting error inherent in the direct forecast of growth itself.*

Second, there is a potential element of circularity in estimating g by a forecast of b and ROE for the utility being regulated, since ROE is determined in large part by regulation. To estimate what ROE resides in the minds of investors is equivalent to estimating the market's assessment of the outcome of regulatory hearings. Expected ROE is exactly what regulatory commissions set in determining an allowed rate of return. In other words, the method requires an estimate of return on equity before it can even be implemented. Common sense would dictate the inconsistency of a return on equity recommendation that is different than the expected ROE that the method assumes the utility will earn forever. For example, using an expected return on equity of 11% to determine the growth rate and using the growth rate to recommend a return on equity of 9% is inconsistent. It is not reasonable to assume that this regulatory utility company is expected to earn 11% forever, but recommend a 9% return on equity. The only way this utility can earn 11% is that rates be set by the regulator so that the utility will, in fact, earn 11%....

Third, the empirical finance literature discussed earlier demonstrates that the sustainable growth method of determining growth is not as significantly correlated to measures of value, such as stock price and price/earnings ratios, as other historical measures or analysts' growth forecasts. Other proxies for growth such as historical growth rates and analysts' growth forecasts outperform retention growth estimates. (italics added)

In view of the foregoing, it is clear that Mr. Gorman's application of the sustainable growth constant growth DCF is circular and ignores the basic principle of rate base / rate of return regulation, namely, that the cost of equity which will be authorized in this proceeding will be applied to the jurisdictional book value rate base of IAWC and become the allowed future earned return on book common equity, i.e., the expected ROE component of the sustainable growth method.

Also in view of all of the foregoing, the use of analysts' forecasts of EPS growth should not be rejected when estimating today's market cost of capital.

There is no need to reject the empirical evidence of the proven reliability of analysts' forecasts of EPS by turning to either a sustainable growth constant growth or a multi-stage DCF model.

D. Capital Asset Pricing Model

Q40. Please comment upon Mr. Gorman's application of the CAPM.

A. Mr. Gorman's application of the CAPM is flawed for three reasons: (1) his derivation of the market equity risk premium is incorrect; (2) his "forward-looking" equity risk premium is not truly a prospective equity risk premium; and, (3) Mr. Gorman failed to utilize the ECAPM in addition to the traditional CAPM.

Q41. How is Mr. Gorman's historical market equity risk premium incorrectly derived?

A. Mr. Gorman's market equity risk premium is the difference between the arithmetic mean 1926-2010 total return on large company stocks of 11.9% and the arithmetic mean 1926-2010 total return on long-term government bonds of 5.9% from the SBBI - 2011 which results in a 6.0% market equity risk premium. The correct derivation of the historical market equity risk premium is the difference between the total return on large company stocks of 11.9% and the arithmetic mean 1926-2010 income return on long-term government bonds of 5.2%, resulting in a market equity risk premium of 6.7%. Regarding the use of the income return and not the total return for Treasury securities in deriving an equity risk premium, on page 8 of IAWC Exhibit 10.12R, SBBI - 2011 states²⁸ :

Another point to keep in mind when calculating the equity risk premium is that the income return on the appropriate-horizon Treasury security, rather than the total return, is used in the

²⁸ Ibbotson 2011 SBBI 55.

calculation. The total return is comprised of three return components: the income return, the capital appreciation return, and the reinvestment return. The income return is defined as the portion of the total return that results from a periodic cash flow or, in this case, the bond coupon payment. The capital appreciation return results from the price change of a bond over a specific period. Bond prices generally change in reaction to unexpected fluctuations in yields. Reinvestment return is the return on a given month's investment income when reinvested into the same asset class in the subsequent months of the year. The income return is thus used in the estimation of the equity risk premium because it represents the truly riskless portion of the return.^{2 (footnote omitted)} (emphasis added)

Hence, the correct historical market equity risk premium is 6.7% and not 6.0%.

Q42. Why is Mr. Gorman's "forward-looking" equity risk premium not truly forward-looking?

A. Mr. Gorman derived his "forward-looking" equity risk premium by merely adding a current consensus analysts' inflation projection to the SBBI - 2011 long-term historical arithmetic mean real market return for the years 1926-2010. It is not appropriate to try and match a current forecast of inflation, 2.3% from Blue Chip, with an average real market return over a period of 85 years. In my opinion, investors would not attempt to do such a thing. Rather, they would be influenced by a forecast such as that published by Value Line which is widely subscribed to and is available in the business reference section of most libraries. A more appropriate method of deriving the prospective equity market return is based upon Value Line's projected 3-5 year market appreciation potential, which when converted to an annual rate plus the market's median expected dividend yield results in a forecasted total annual market return of 16.30% for the thirteen-weeks ending February 17, 2012 and derived as explained in Note 2 of IAWC

Exhibit 10.19R. This methodology yields a truly prospective market return which is based upon an important investor-influencing publication.

Q43. Why should Mr. Gorman have included an ECAPM analysis in deriving his CAPM-based common equity cost rate?

A. As discussed previously in this rebuttal testimony, the empirical Security Market Line (SML) described by the traditional CAPM is not as steeply sloped as the predicted SML. As Morin²⁹ notes, “low-beta securities earn returns somewhat higher than the CAPM would predict, and high-beta securities earn less than predicted.” Hence, both the traditional CAPM and ECAPM should be used in deriving a CAPM-based common equity cost rate. I have shown the results of applying both the traditional CAPM and ECAPM to Mr. Gorman’s water companies using correctly derived historical and projected market equity risk premiums. As shown on IAWC Exhibit 10.19R, the traditional CAPM result is 11.42%, while the ECAPM result is 11.17%. The average of both cost rates is 10.80%.

E. Financial Integrity

Q44. Please comment upon Mr. Gorman’s financial integrity analysis at page 37, line 700 through page 39, line 753 of his Direct Testimony.

A. In view of S&P’s financial matrix, Mr. Gorman’s comparison to S&P’s financial benchmark financial ratios is misplaced and should be disregarded,

Mr. Gorman has provided no empirical evidence to assume that American Water is an appropriate “risk proxy affiliate” for IAWC. American Water has regulated operations in nineteen (19) states, thus benefiting from geographical

²⁹ Morin, 175.

and regulatory diversity. Also, American Water is a much larger company than IAWC. Clearly, the risks of American Water on a consolidated basis are not similar to those of IAWC.

Moreover, S&P is clear in its description of its revised ratings matrix that it does not assign a credit, bond rating, business or financial risk profile based upon a spot financial metrics as Mr. Gorman has done on page 39 of his Direct Testimony. On pages 4 and 5 of IAWC Exhibit 10.04, S&P states:

The rating matrix indicative outcomes are what we typically observe – but are not meant to be precise indications or guarantees of future rating opinions. . . . Still, it is essential to realize that the financial benchmarks are guidelines, neither gospel nor guarantees. . . . Moreover, our assessment of financial risk is not as simplistic as looking at a few ratios.

F. Recommended Common Equity Cost Rate

Q45. Do the corrected IAWC/FEA DCF and CAPM, discussed previously, adequately reflect IAWC's unique investment risks as well as flotation costs?

A. No. As discussed in my Direct Testimony, at page 21, line 549 through page 25, line 631 and in Mr. Suits' Direct Testimony (IAWC Exhibit 2.00 (Rev.)), IAWC faces unique investment risks (due to regulatory risks specific to Illinois, the availability and quality of IAWC's water supply, flood risk, environmental risks and risks related to the nature of certain customers). In my informed expert judgment, an upward adjustment of 0.25% is warranted.

Q46. You also previously noted that Mr. Gorman did not reflect flotation costs in its recommended common equity cost rate. Please comment.

A. As discussed on page 76, line 1985 through page 79, line 2057, of my Direct Testimony, it is necessary to include flotation costs, i.e., those costs associated with the sale of new issuance of common stock, in the common equity cost rate recommendation. As previously discussed, there is no other mechanism in the ratemaking paradigm with which such costs can be recovered. Using the methodology described on page 79, lines 2038 – 2045 of my Direct Testimony, and the corrected IIWC/FEA DCF cost rate results in a flotation cost adjustment of 0.15%.

Q47. Based upon the corrected IIWC/FEA DCF and CAPM discussed previously, what would Mr. Gorman's recommendation be once IAWC's unique investment risks and flotation costs are reflected?

A. As shown on IAWC Exhibit 10.17R, the corrected IIWC/FEA DCF is 11.06% and as shown on IAWC Exhibit 10.19R, the corrected IIWC/FEA CAPM is 10.80%. These cost rates average 10.93% ($10.93\% = (11.06\% + 10.80\%) / 2$). When an investment risk adjustment of 0.25% and a flotation cost adjustment of 0.15% are added, a corrected indicated IIWC/FEA common equity cost rate of 11.33% ($11.33\% = 10.93\% + 0.25\% + 0.15\%$) results.

VI. RESPONSE TO MR. GORMAN'S COMMENTS

Q48. At page 3, line 48 through page 4, line 57 of his Direct Testimony, Mr. Gorman discusses why he believes that recently authorized returns on common equity for electric and gas utilities do not support your recommended common equity cost rate. Please comment.

A. As previously discussed in this rebuttal testimony and in my Direct Testimony at page 9, line 204 through page 21, line 547 and shown in IAWC Exhibit 10.02 and

10.03, the water utility industry faces unique investment risks relative to the electric, combination electric and gas and natural gas industries. Therefore, recently authorized returns on common equity for electric and gas utilities provide little to no insight into a common equity cost rate applicable to any water utility and specifically applicable to IAWC. When reviewing authorized returns on common equity for electric and gas utilities, it may be kept in mind that the investment risk of the water utility industry is greater than that of the investment risk of the electric or gas utility industries as discussed in my Direct Testimony at page 18, line 472 through page 21, line 547.

Q49. At page 44, line 825 through page 45, line 845 of his rebuttal testimony, Mr. Gorman criticizes your use of security analysts' forecasts of EPS growth in your application of the DCF model. Please comment.

A. As previously discussed in this rebuttal testimony, there is a wealth of empirical and academic literature which supports the superiority of analyst's forecasts of EPS as measures of investor expectations. Mr. Gorman has provided no empirical evidence that analysts' forecasted growth in EPS for the water group is a temporary phenomenon which will subside after the next five years or so. There is also no empirical evidence that EPS would grow at the average growth of the economy, or GDP growth. Mr. Gorman bases his support for the three-stage DCF upon his belief that analysts' forecasted growth rates in EPS, especially for water companies, "exceed reasonable estimates of long-term sustainable growth . . . [which] substantially exceed the expected long-term growth of the U.S. economy." (see pages 44, line 828 and 831 - 832 of Mr.

Gorman's Direct Testimony). However, based upon the previously cited wealth of empirical and academic support for the use of security analysts' growth forecasts of EPS in the DCF model, current earnings growth forecasts are the appropriate growth rates to use in a DCF analysis.

Q50. At page 45, lines 849 - 858 of IWC/FEA Exhibit 1.0, his Direct Testimony, Mr. Gorman discusses his application of a three-stage growth DCF model to the market data and growth rates you relied upon for your water proxy group. Please comment.

A. The results of Mr. Gorman's three-stage growth DCF model using the market data and growth rates I relied upon for my water proxy group should be disregarded by the ICC. It is clear from both this rebuttal testimony and my Direct Testimony, (page 36, line 921 through page 37, line 941) that there is no valid rationale for undertaking a multi-stage DCF analysis to determine the common equity cost rates of mature, stable public utility companies.

Q51. At page 46, line 872 through page 10, line 918 of his Direct Testimony, Mr. Gorman discusses his issues with your risk premium analysis. Please comment.

A. Mr. Gorman's first issue is my reliance upon projected bond yields. As discussed previously in this rebuttal testimony, both the determination of the cost of capital and the ratemaking are prospective in nature. Therefore, events that affect the future, impact market activity, volatility and investor expectations and are relevant to the determination of the cost of common equity. Consequently, any comments regarding the fact that the prospective bond yield exceeds current observable

bond yields are irrelevant. Market prices are a function of investors' expectations for the future, including analysts' expectations. Thus, the ICC should rely upon forecasted interest rates in both an RPM and a CAPM analysis.

Mr. Gorman also takes issue with what he claims is my use of a corporate bond yield as a risk-free rate. Nowhere in my Direct Testimony do I claim that the corporate bond yield used in the RPM is the risk-free rate.

Quite possibly, Mr. Gorman believes my use of a corporate / public utility bond yield "as a risk-free rate" is based upon my use of beta to apportion the market equity risk premium to reflect the risk of the proxy group of water companies. Roger A. Morin provides the rationale for such risk apportionment when he states³⁰:

The risk premium estimates derived from a composite market index must be adjusted for any risk differences between the equity market index employed in deriving the risk premium and a specified utility common stock. Several methods can be used to effect the proper risk adjustment.

* * *

First, the beta risk measure for the subject utility or the beta of a group of equivalent risk companies can service as an adjustment device. The market risk premium, RP_M , is multiplied by the beta of the utility, β_i , to find the utility's own risk premium, RP_i :

$$RP_i = \beta_i RP_M$$

And the beta-adjusted risk premium is added to the bond yield to arrive at the utility's own cost of equity capital.

Clearly, Mr. Gorman is mistaken in his recommendation that my "estimated market risk premium is overstated and based on a faulty premise."

³⁰ Id., at pp. 119-120.

Q52. At page 47 line 901 through page 48, line 913 of his Direct Testimony, Mr. Gorman discusses his second issue with your risk premium analysis. Please comment.

A. Mr. Gorman's second issue relates to my use of the yield on public utility bonds as opposed to the total return to derive the equity risk premium in my RPM analysis. Because the investment horizon of utilities' common stock is presumed to be long-term, i.e., in perpetuity, by the cost of common equity models used by the witnesses in this proceeding, especially the DCF model, it is entirely appropriate to use the yield on long-term utility bonds when deriving an equity risk premium based upon utility bonds. Using the yield, as opposed to the total return which reflects annual price appreciation and depreciation, on utility bonds presumes that the bond will be held to maturity and thus its yield over the life of the bond is the total return. In addition, the academic literature relating to the bond yield plus risk premium approach to the cost of common equity uses a bond yield, and not the total bond return.³¹

Q53. At page 48, line 928 through page 49, line 949 of IWC/FEA Exhibit 1.0, his Direct Testimony, Mr. Gorman discusses why he believes your market equity risk premium is overstated. Please comment.

A. Mr. Gorman states on page 48, lines 938 and 939 of his Direct Testimony, that my "derived equity risk premium of 9.72% based on *Value Line* data is inflated and unreliable" because it is based upon an expected market appreciation which is not sustainable because it is "substantially higher" than the GDP growth rate. I have previously addressed why it is inappropriate to compare projected EPS

³¹ Morin 112-113.

growth rates with the GDP growth rate, so I will not repeat that discussion here. However, while U.S. GDP growth represents growth in the market value of all goods and services produced in the U.S. in a given period, it is not equivalent to capital market appreciation. Growth in GDP is a measure of economic output, not a measure of growth in the value of a portion of the capital (the common equity capital) invested to create that output. GDP grows due to the capital investment and labor productivity employed to create that economic output. In contrast, growth in the market value of common stock is a product of investor expectations. Therefore, Mr. Gorman's comparison of capital market appreciation with U.S. GDP growth is meaningless.

Q54. At page 49, line 952 through page 51, line 984, Mr. Gorman expresses his "concerns" with your empirical CAPM analysis (ECAPM). Please comment.

A. Mr. Gorman's "concerns" arise from his confusing the adjustment of beta with the ECAPM. As previously discussed in my rebuttal testimony and my Direct Testimony, there is considerable academic and regulatory support for the use of the ECAPM. As explained in my Direct Testimony, at page 59, lines 1515 - 1540 and in this rebuttal testimony, it is essential to take into account the reality that the empirical Security Market Line (SML) described by the traditional CAPM is not as steeply sloped as the predicted SML. The ECAPM is thus a return adjustment which accounts for this reality and is not an adjustment to beta which is an x-axis adjustment accounting for regression bias. Hence, the use of adjusted betas is not equivalent to the ECAPM. Mr. Gorman's "concerns" are unfounded and unsupported.

Q55. At page 51, line 992 through page 52 line 1006 of his Direct Testimony, Mr. Gorman discusses his issues with your non-price regulated utility analysis. Please comment.

A. First, Mr. Gorman has mischaracterized my non-price regulated utility analysis as a Comparable Earnings Model or CEM. Nowhere in my Direct Testimony have I used the words “Comparable Earnings Model” or the acronym “CEM.” That being said, the concept of evaluating projected earned returns on book common equity, net worth, or partners’ capital, stems from the comparable earnings concept. However, I have coupled that evaluation with the application of the DCF, RPM and CAPM to the non-price regulated companies comparable in total risk to the proxy group of water companies.

Mr. Gorman states, without any substantiation or rationale, at lines 1000 - 1003 on page 52 of his Direct Testimony, that “[a] comparable earnings analysis is not a competent method of estimating the current return requirements of investors who assume the risk of a water utility investment.” The same can be said for the accounting measures of growth used by rate of return analysts. As explained previously, security analysts’ forecasts of EPS growth are based upon their consensus of accounting based earnings per share. Such accounting measures are independent of investor expectations, thus, they do not measure investors’ return requirements, rather, they serve as a proxy for them.

In addition, both Mr. Gorman’s statements on page 53, lines 1037 – 1045 of his Direct Testimony, that the non-price regulated companies cannot serve as proxies for the water companies and that I have “not shown that they have

comparable business and operating risk to a low-risk regulated utility company” are incorrect, as the selection criteria for the proxy group of non-price regulated companies are based upon measures of total risk, i.e., systematic (non-diversifiable) risk as measured by betas and non-systematic (diversifiable) risk as measured by the standard errors of the regression giving rise to the betas, as discussed in detail on page 64, line 1681 through page 67, line 1735 of my Direct Testimony.

The selection criteria are derived from the “corresponding risk” standard of the landmark cases of the U.S. Supreme Court. Therefore, they are consistent with the *Hope* doctrine that the return to the equity investor should be commensurate with returns on investments in other firms having corresponding risks.

Roger A. Morin³² states (see page 3 of IAWC Exhibit 10.20R):

The Comparable Earnings standard has a long and rich history in regulatory proceedings, and finds its origins in the fair return doctrine enunciated by the U.S. Supreme Court in the landmark *Hope* case. The governing principle for setting a fair return decreed in *Hope* is that the allowable return on equity should be commensurate with returns on investments in other firms having comparable risks, and that the allowed return should be sufficient to assure confidence in the financial integrity of the firm, in order to maintain creditworthiness and ability to attract capital on reasonable terms. Two distinct standards emerge from this basic premise: a standard of Capital Attraction and a standard of Comparable Earnings. The Capital Attraction standard focuses on investors’ return requirements, and is applied through market value methods described in prior chapters, such as DCF, CAPM, or Risk Premium. The Comparable Earnings standard uses the return earned on book equity investment by enterprises of comparable risks as the measure of fair return.

He concludes on page 394 (page 16 of IAWC Exhibit 10.20R):

³² Morin 381.

More fundamentally, the basic premise of the Comparable Earnings approach is that regulation should emulate the competitive result. It is not clear from this premise which is the proper level of competition being referenced. Is the norm the perfect competition model of economics where no monopolistic elements exist, or is it the degree of competition actually prevailing in the economy? A strong case for the latter can be made of grounds of fairness alone.

Although the Comparable Earnings test does not square well with economic theory, the approach is nevertheless meritorious. If the basic purpose of comparable earnings is to set a fair return rather than determine the true economic return, then the argument is academic. If regulators consider a fair return as one that equals the book rates of return earned by comparable-risk firms rather than one that is equal to the cost of capital of such firms, the Comparable Earnings test is relevant. This notion of fairness, rooted in the traditional legalistic interpretation of the *Hope* language, validates the Comparable Earnings.

Consequently, because the non-price regulated companies are comparable in total risk, the returns on their book values and the costs or common equity derived from the application of the DCF, RPM, and CAPM are relevant to the returns on book values of price regulated companies and hence appropriate for setting an authorized return rate on common equity in the current proceeding. Once again, Mr. Gorman's criticisms are unfounded and should be disregarded.

Q56. At page 54, lines 1056 – 1062 of his Direct Testimony, Mr. Gorman discusses why he believes that your adjustment for flotation costs is not appropriate. Please comment.

A. As discussed earlier, there is no other mechanism in the ratemaking paradigm with which flotation costs can be recovered (see IAWC Exhibit 10.15R). The costs associated with the sale of new issuances of common stock are real and

legitimate. Therefore, their recovery should be permitted. As the cost of common equity cost rate models used all Ms. Freetly, Mr. Gorman and myself do not reflect flotation costs, an adjustment to the cost rate of common equity developed from these models as applied to the market data of proxy group of water companies to reflect such costs is necessary. Furthermore, since IAWC is a subsidiary of American Water, it is reasonable to base such an adjustment on the issuance costs incurred by American Water. Using the updated DCF cost rate of the proxy group of water companies, the updated flotation cost is 0.15%

Q57. At page 55, line 1079 – 1090 of his Direct Testimony, Mr. Gorman criticizes the adjustment of 0.25% you made in recognition of IAWC’s unique investment risks. Please comment.

A. Mr. Gorman criticisms are misplaced. While the seven factors listed by Mr. Gorman on lines 1069 – 1075 on page 55 of his Direct Testimony, may also affect the regulated subsidiaries of the publicly traded proxy group companies, the proxy group companies are, on average, larger than IAWC and more geographically and regulatory risk diversified. As discussed on page 25, line 635 – 647 of my Direct Testimony, smaller companies are less able to cope with significant events which affect sales revenues and earnings; are generally less diverse in their operations and generally experience less financial flexibility.

As further discussed in my Direct Testimony, at page 25, line 648 through page 26, line 670, as well as supported by previously cited financial literature, size is a factor affecting common equity cost rate and must be reflected in any common equity cost rate derived from proxy group of utilities whose average

1257 market capitalizations differ from that of the regulated jurisdictional utility. None of
1258 the selection criteria used by any of the cost of capital witnesses in this
1259 proceeding reflect that portion of common equity risk attributable to relative size
1260 which greatly affects IAWC's ability to withstand the unique risks described by
1261 Mr. Suits.

1262 Mr. Gorman particularly emphasizes that the bond rating process
1263 considers these factors in assigning bond ratings on page 55, lines 1082 – 1083
1264 of his Direct Testimony. However, that situation does not exist in the current
1265 proceeding. S&P has assigned neither a bond rating, credit rating, business risk
1266 profile nor a financial risk profile to IAWC.

1267 Such a discussion as Mr. Gorman's cannot eliminate the reality
1268 recognized in the financial literature, including SBBI - 2011, that smaller
1269 companies earn higher market rates of return over the long run than do larger,
1270 less risky companies. Even if IAWC were assigned a bond rating, credit rating,
1271 business risk profile and financial risk profile similar to the selected proxy
1272 group(s), it is unrealistic to suggest that the proxy group and IAWC would be
1273 identical in risk. This is tantamount to saying because puppies come from the
1274 same litter, that they all have the same color coat and temperament. This is, of
1275 course, is not so. Each puppy is distinct. Hence, Mr. Gorman's contention on
1276 page 55, lines 1088 – 1090 that "on a total risk assessment basis. . . indicates
1277 that Illinois-American has reasonable, risk comparable proxies in the Water and
1278 Gas Proxy groups" is inaccurate and unreasonable.

VII. UPDATED OVERALL COST OF CAPITAL AND RATE OF RETURN ON
COMMON EQUITY

Q58. Have you updated your recommended rate of return on common equity for IAWC?

A. Yes. Page 1 of IAWC Exhibit 10.21R shows the updated overall rate of return for IAWC of 8.69% using the estimated capital structure ratios and senior capital cost rates at September 30, 2013 and my updated common equity cost rate recommendation of 11.25%. In arriving at my updated common equity cost rate recommendation, I have applied the same four cost of common equity models in an identical manner to the current market data of the proxy group of water companies as in my direct testimony.

Q59. Does this conclude your rebuttal testimony?

A. Yes, it does.